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FEEDING IN A PORTUGUESE PREGNANT WOMEN CASE STUDY APPLYING ICNP

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ABSTRACT

Objective: To describe the understanding of a pregnant woman about eating.

Methods: Narrative analysis through ideographic explanation.

Results: Diagnoses were defined in ICNP®, version 2: a) potentiate for better knowledge about pregnancy, b) potentiate to improve knowledge about body image. Eating in pregnancy is oriented by organic needs and cultural practices. A balance between technical recommendation and food culture is needed.

Conclusion: To improve pregnancy experience, the maternity staff should consider the mother's perception about eating. In Portugal, the primary health care needs to occupy a more relevant position. It is suggested to introduce the focus on body image.

Keywords: body image, case study, pregnancy, prenatal care.

INTRODUCTION

Food is the source of energy for the organism from conception to old age. Even spermatogenesis and oogenesis are influenced by the nutritional status of the progenitors⁽¹⁾. The female fertility depends on a minimum of 22% body fat, but percentages over 31% hamper pregnancy, being both conditions associated with estradiol reduction on follicular phase⁽²⁾.

As other aspects of life, eating is culturally defined, and nurses have the competence to provide culturally congruent care⁽³⁾. The eating in the pregnancy and postpartum cycle is governed by beliefs, sociocultural norms that express maternal-fetal benefit. On the other hand, the organic depletion of nutrients expresses itself in unusual food intake. Geophagia, lithophagia, trichophagia, pagophagia, among others, are well-known disorders denominated "pica", and well-known is the desire for specific food^(4,5). Clinical orientations facilitate the facing of complications in the pregnancy and postpartum period⁽⁶⁾, as recommended by the General Directorate of Health (i.e., Feeding and Nutrition in Pregnancy. DGS, 2015). The unique needs of each woman confirm the importance of personalized care and can be observed through a case study, in the light of CIPE^(6,7).

The objectives of this study are a) to describe the understanding of a pregnant woman about healthy eating, b) to identify the nursing diagnosis related to feeding.

Case Description

Maria (fictitious name), 33 years-old, Caucasian, has a well-cared aspect. She is a licensed radiology technician and lives with a 30-year-old partner. After preconception consultation, when the contraceptive ring was removed, she started folic acid treatment. Nulliparous, with simple and not scheduled pregnancy, unknown until the 14th week – the moment when she started prenatal surveillance, without remembering the date of last menstrual period (LMP). At this point, she started to take iron and multivitamin, but not potassium iodide. Referring to the 1st trimester, she mentions discomforts such as increasing breast tenderness, heavy legs sensation, urinary urgency, and emotional instability, which she considered to be a premenstrual syndrome.

Currently, Maria is in the second trimester, with about 18 weeks of pregnancy. It is a pregnancy with clinical risk due to occupational exposure to x-rays. This situation is identified as a cause of anxiety at the 14th week. Eating is her current concern, given the food choices she makes. In such choices, a conflict seems to occur between a) the local traditional diet, b) the diet she understands for herself as a pregnant woman, c) anticipation about the diet implications on her child's health. The Body Mass Index (BMI) of 19.92 (weight= 51kg; height= 1.60m), prior to pregnancy, is in the normoponderal category (i.e., National Surveillance Program to Low-risk Pregnancy, DGS, 2015). On the 14th, week she weighed 55kg and, currently, on the 18th week, maintained the same weight. Maria is normotensive (i.e., 100/65) and normocardiac (i.e., 76p/m).

METHODOLOGY

This was a case study, conducted in an academic context, which obtained a positive opinion of the Research Ethics Committee of the University (i.e., record 17023). Ethical principles were respected, according to Norm No. 015/2013 of DGS, which follows the precepts of the Helsinki Declaration. The data collection occurred in April and May 2017. A guide was used during the interview (Appendix A). We analyzed the interview narrative and applied the taxonomy of the International Classification for Nursing Practice (ICNP; version 2.4, available on the health unit) and the clinical orientations (i.e., according to DGS 2015: Feeding and Nutrition in Pregnancy and National Surveillance Program of Low-risk Pregnancy) in the interpretation of results.

RESULTS

Through the participant's report on eating during pregnancy, the ideographic analysis was conducted, corresponding to the first objective of the study. Thirty-five meaning units emerged from it, which are expressed in common language and report the experience. Such meaning units are interpreted in a global and abstract perspective, generating 10 other units. In a third interpretation process, we achieved the emerging units of the phenomenon: a) recognition of healthy eating concept in pregnancy, b) conflict with the traditional diet, and c) recognition of differences in the attitudes of health technicians. The concept of healthy eating in pregnancy is sustained in the concern with food quality, the frequency of food intake throughout the day, and the understanding of fetus's health as intrinsic to own health. In the second unit, "conflict with the traditional diet", it is noteworthy the need for changing behaviors, both in local habits, such as commercial offer, as in the feeding on moments of socialization. The third concept, the narrative, conveys sensibility to the attitude of health technicians and refers to her perspective about their posture (table 1).

Table 1 - Emerging meanings in the ideographic analysis on eating

Meaning Units	Interpretation	Emerging Units
(...) I try to compare the labels (...) proteins, carbohydrates, salt (...) grab a yogurt (...) I worry a lot about the yogurts we buy Sometimes we go to the supermarket and the light (yogurts) are full of sugar (...) a yogurt that tastes good for me is loaded with sugar we can put zucchini, carrot, ah... everything, leek, whatever we have at home (laughs). The vegetables, (...) spinach, or curly docks, or watercress The breakfast... now is milk, because the doctor told me to drink milk After the mid-morning is when I eat bread, always with cereals, with turkey ham... in the morning (...) I make oatmeal porridge with yogurt, linseed, any fruit I have, or kiwi, or plum I have a normal meal (...) I eat soup, second course, and fruit (...)	Eating quality food, from selection to cooking	Recognition of the concept of healthy eating in pregnancy
The eating of the mother is the feeding of the baby The baby only eats what we give it to eat...	Eating quality food frequently	
(...) my mother always makes stews, with potatoes, peas, carrot... I used to eat with slices of bread, but I took the bread away, now I eat the soup without slices of bread Sometimes we go out to lunch, dine, we go to friends' houses If we can't eat chorizo nor lard, there is no fat But the baby needs me to eat for two I love butter, but it is pure fat (...) tastes so good... when you eat a slice you must eat another I don't eat butter... hm... sometimes I do, of course... Of course, there are days of foolishness (laughs)...	Culturally defined diet	Conflict with the traditional diet
I was concerned with the food and was always reticent about what to eat (Yogurts) I eat are quite bitter and I also can't tolerate them pure (puts sugar)	Recognized eating errors	
(...) it's another rule... he is older (the health technician), he only has that limit (prescription) (...) he (the health technician) says "Stop that, this is what you're going to do" I can't eat now as I used to (...) for example, now I'm drinking milk again (she does not like milk), but he (the health technician) says I must drink (...) it is more tranquil at the health center, and they tell me "try this" (...) the family nurse has been helping me to understand some foods (...) when I have any problem I send her (to the nurse) a message	The health technician as food prescriber	Recognition of differences in the attitude of health technicians
	The health technician as adviser and resource	

In the analysis of narrative, a fourth unit emerged *a posteriori*: self-care of body image in pregnancy. Such meaning is rooted in the very cohabitation with an unknown corporeality. A typical imagery of the pregnant body arises, and also the expectation for strange shapes and volumes. The narrative shows both the adherence to the stereotype of pregnancy as a bulky body as well as the concern with a satisfactory body image (table 2).

Table 2 - Emerging meanings in the ideographic analysis on corporeality

Meaning Units	Interpretation	Emerging Units
Maybe in the future, it will be a greater increase (of the breasts), I probably won't like it...	Cultivating a positive image of pregnancy	Self-care about body image during pregnancy
My greatest concern was not to get fat		
In the old days that was the idea they had (fatten up during pregnancy), but it changed a lot	Conflict between the intake diet and traditional body image	
Nowadays many people take care of the diet and no longer fatten 10kg, 20 kg.		
A pregnant woman should be chubby (laughs) cause a skinny pregnant woman is not normal		
I do a little exercise (...) I try to take a walk	Maintenance of Physical Exercise	
I don't go to gym, or do exercises of great physical effort		
I do everything the same, unchanged... Without saying "you're pregnant, you may have restrictions to some exercise levels".		

In response to the last two goals of the case study, we used the ICNP taxonomy available at the health unit platform (i.e., SClinico). Based on the emerging meanings of the participant's experience, we passed on to the technical language comprised in the phenomena, focuses, diagnoses, and diagnostic interventions. In the Health Program of Maternal Health (PNSM), we considered: a) the "gestation" phenomenon with focus on "pregnancy" (cod 1A111153). Regarding the attention focus on "pregnancy", we selected one of the 12 nursing diagnosis options (i.e., to potentiate for a better knowledge of pregnancy) and, simultaneously, three of 20 diagnostic interventions and its respective items. The evaluation of the knowledge concerning eating was satisfactory, based on the Mediterranean diet

(i.e., DGS, 2015: National Surveillance Program for Low-risk Pregnancy), revealing space for improvement. Gestational age will be 18 weeks, considering the ultrasound performed at the 14th week. BMI=21.48 (i.e., weight=55Kg; height=1.60).

In the continuity of the “gestation” phenomenon, we observed a lack of focuses on the platform that could frame the emerging category of “body image”, which appeared *a posteriori*. Thus, we resort to the Health Program, in the comprehensive sense given by SClinico. The concept of “individual” was verified and the concept tree was roamed until achieving the focus on “body image” (cod. 1A112123) (table 3).

Table 3 - Application of ICNP Taxonomy to the case

Nursing Diagnosis	Diagnostic Interventions	Group items
To potentiate for better knowledge of pregnancy	To assess the knowledge about pregnancy	Does not show
		Shows
		Not applicable
	To monitor the Body Mass Index	Weight/height ² assessment
Potential to improve knowledge of body image	To monitor gestational age	LMP
	To assess knowledge of body image	Changes in body image Adaptive strategies

For performing diagnostic interventions, the DGS guidelines were used (i.e., DGS 2015: National Surveillance Program for Low-risk Pregnancy, and Feeding and Nutrition in Pregnancy) concerning recommendations of food quality, quantity, intake regularity, and hygiene precautions. The diagnostic interventions also reflected the weight evolution according to the progress in gestational age.

DISCUSSION

Without knowing the LMP, the dating was by ultrasound evaluation. The dating of pregnancy is fundamental⁽⁸⁾, but it is important to mention that there is controversy as to the description of the term “pregnancy” since ICNP considers it a 266-day cycle, from fertilization to birth. In fact, in each woman’s menstrual cycle the “fertility window” is variable, the egg viability is 6-24h and sperm, 5 days, in an environment of estrogenized cervical mucus. Thus, it is preferable to define the focus of “pregnancy” from the LMP⁽⁸⁾, as occurs in most obstetric care. On the other hand, the 266 days of “pregnancy” in the description, corresponding to 38 weeks between fertilization and birth, does not contemplate the last period of pregnancy near term⁽⁹⁾, also considering the clinical orientations of DGS (i.e., DGS 2015: National Surveillance Program for Low-risk Pregnancy, and Feeding and Nutrition in Pregnancy).

The relevance of the case study, oriented to the participant’s eating habits, is inserted in the recommendations for a quality diet in pregnancy (i.e., DGS 2015: National Surveillance Program for Low-risk Pregnancy, and Feeding and Nutrition in Pregnancy). Such subject is interesting because the viability, strength, and health of the fetus require a persistently balanced diet. Currently, there is evidence that some diseases (i.e., cardiovascular, diabetes, some oncological and infectious ones) are rooted in fetal malnutrition⁽¹⁾.

The participant recognizes that a healthy diet has implications for herself and for the fetus. In fact, during pregnancy, the diet sustains the woman’s needs and the plastic construction of the embryo, which is in the faster phase of human development. Maria incurs in some eating deviations due to socialization or local tradition, but has knowledge enough to avoid body depletion, and guides the diet in quality and quantity. Thus, the nursing diagnosis is to “potentiate for better understanding”. When taking care of the participant, the health technician implements the recommendations of the World Health Organization (WHO) focusing on: a) inclusion of green vegetables, fruits, in addition to meat, fish, dry fruits and legumes, preventing overweight, and b) inclusion of supplementary folic acid and iron. The participant began the supplementation with folic acid and iron in the preconception phase. In Portugal, DGS orientations recommend a daily dose of oral iron between 30mg and 60mg, and 400µg of folic acid (i.e., DGS. 2015: Feeding and Nutrition in Pregnancy).

Such recommendation arises to favor the preservation and closure of the neural tube, among other things (i.e., DGS. 2015: National Surveillance Program for Low-risk Pregnancy). Maria does not take Vitamin A or calcium, and, for the Portuguese woman, these

are normally not necessary. Considering the multiculturalism in Portugal, the option of Vitamin A is proposed in the case of Indian descent, where this necessity is prevalent. Calcium depletion is more common in multiparous women, twin pregnancies and, in general, is more pronounced in the last trimester, possibly generating preeclampsia and eclampsia cases (i.e., DGS. 2015: National Surveillance Program for Low-risk Pregnancy).

In assessing the BMI, we observe a difference of about 1.6kg regarding what was expected (i.e., DGS. 2015: Feeding and Nutrition in Pregnancy). According to the DGS guidelines, Maria should weight 56.6kg at the time of the interview. However, we do not consider there is a case of malnutrition, where it would be necessary to stimulate the protein intake or balanced protein, to decrease the risk of low birth weight (i.e., DGS. 2015: National Surveillance Program for Low-risk Pregnancy). In truth, the reference weight before pregnancy (i.e., 55kg) is not a reliable value, as noticed in the interview, when simultaneously unaware of the LMP. The uncertainty of these parameters hinders a more accurate evaluation of pregnancy evolution.

The meaning of “body image” is inherent to each unique experience of pregnancy. Part of the individuality in which every pregnancy is experienced, the emerging meaning of “body image” *a priori* stresses in itself this unique phase of life. This is a different construction that cannot be compared, for example, with a disturbance in the body image⁽¹⁰⁾. Maria, noting some modifications in her body, tries to eat in a manner she has no excess weight, but wonders whether she is going to like her pregnant body or not. Veritably, the shapes, sizes, and textures of pregnancy are very plastic. On the other hand, the female body shows through a pregnancy that the reproductive essence is exactly the opposite of the female-erotic valued by the society. It will not be surprising, even without raising the diagnosis of “compromised body image” in Maria, some questioning on satisfaction regarding body image. In the self-care with the body image, Maria practices physical activities, in a balanced way, in her daily life. This is emphasized by DGS, considering that physical activity, when associated with a healthy diet, optimizes the intake of nutrients.

Finally, we can say that the case study presents a normal pregnancy, lived with its typical anxiety. It would be fruitful that the care provided is congruent with the pregnant woman standards. In fact, all pregnancies should be monitored by health technicians because the health of the child is heavily dependent on the intrauterine life which is provided to it (i.e., DGS. 2015: Feeding and Nutrition in Pregnancy). Thus, through the phenomenon of pregnancy, deficiencies in the ICNP taxonomy were revealed, underlining its clinical importance⁽⁷⁾ for nursing care development.

FINAL CONSIDERATIONS

We gathered data on the eating practice during pregnancy, interpreting it through ICNP. It is advantageous that the health technicians, respecting clinical guidelines for a good nutrition, reject prescriptive attitudes and conduct a prenatal surveillance focused on the pregnant woman. Also, it must be acknowledged that alterations on body image simultaneously bring pleasure and strangeness.

Limitations

Available diagnoses on the computer system are scarce for the pregnancy phenomenon. These limitations give consistency to this study, stimulating the development of ICNP for maternal health.

Implications for Nursing

In the application of the ICNP system, we found evidence of lacking of diagnoses on the platform. Case studies are a suitable methodology to identify gaps in clinical exercise. The searching and publication of local gaps can have repercussions in other latitudes. Development of ICNP taxonomy for maternal health should be considered.

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Appendix A
Interview Guide

Dimension	Objectives	Topics
Block 1: Legitimizing the interview.	To ensure the participant understands what is asked of her.	<ol style="list-style-type: none"> 1. Information about the academic study 2. Information on data confidentiality 3. Requesting recognition of consent
Block 2: Healthy lifestyle and nutrition.	To define healthy eating practices.	<ol style="list-style-type: none"> 1. Personal concept of healthy eating 2. Daily activities in favor of healthy eating
Block 3: Behavior associated with a healthy lifestyle in pregnancy.	To describe the eating habits during pregnancy.	<ol style="list-style-type: none"> 1. Knowledge of the eating practices of the woman during pregnancy 2. Food choices due to pregnancy 3. Eating orientations from the health services on grounds of pregnancy
Block 4: Interview conclusion.	To demonstrate the importance of the report.	<ol style="list-style-type: none"> 1. Giving opportunity to identify other important aspects not discussed earlier 2. Offering the possibility to send the interview recording 3. Thanking, and closing the interview